

By CPT Edmund A. Guy III

ow do we as leaders in the Fires Center of Excellence work a concept into reality and then continue to make it relevant to the maneuver force in the contemporary operating environment? Counter Rocket, Artillery, Mortars or indirect fire protection capability is actually a living embodiment of a concept that eventually was forged into reality.

With all things considered, the C-RAM/ IFPC concept came into reality rather quickly. In May 2004, the Chief of Staff of the Army at the time, General Peter J. Schoomaker, inquired about a counter indirect fire capability during an Operation Iraq Freedom I after action review. A month later in June 2004, an operational needs statement from theater explained the need for intercept capability in detail, and the necessity to link current equipment found within the forward air defense command and control, and field artillery sensors.

rapid testing was conducted trying to find the right system that would be meet interceptor requirements for the current deployment. Indirect fire events in theater continued to show the need for C-RAM capabilities, whether for intercept or sense and warn capabilities. Less than a year after

The Counter-Rocket Artillery Missile Weapon System fires flares up during a test fire at Joint Base Balad, Iraq, January 31, The C-RAM has the ability to fire up to 4,500 rounds per minute to protect the base against incoming projectiles. (Photo by SrA Brittany Y. Bateman, U.S. Air Force)

the ONS was submitted, the first Sense and Warn Systems were deployed to fight the continued indirect fire threat to our forward operating bases and a month later the first Land-based Phalanx Weapon Systems were deployed. Phalanx is a rapid-fire, computercontrolled, radar-guided gun system designed to defeat anti-ship missiles and other close-in air and surface threats. A selfcontained package, Phalanx automatically carries out functions usually performed by multiple systems -- including search, detection, threat evaluation, tracking, engagement and kill assessment. In less than 10 months after the first fielding, four additional LPWS were delivered to theater and the first indirect fire intercept was recorded. Since the time of that first success, personnel for intercept responsibilities shifted from the Navy to the Army, and then finally to a joint intercept battery concept. Since then sense and warn locations have been added and closely linked together to form 'warning networks.'

rom concept to reality. In a short six years since the ONS was first submitted, we have gone from concept to completing more than 100 intercepts and saving thousands upon thousands of lives by the warning that C-RAM units have

provided ground troops.

The question that remains as the drawdown in Iraq continues and a timetable has been set by the president for end of combat operations in Afghanistan is where does C-RAM go from here? We all know what C-RAM can do in post-combat operations, but what can it bring to the table after major combat operations are done and the Army has gone into stability and support actions?

The next logical step, for those ADA personnel involved in C-RAM, is to start preparing C-RAM, or the Indirect Fire Protection Capability Program, for the next war. If we do not prepare now, I think inevitably IFPC will be left behind with the maneuver force.

merging concepts. Army Operational Concepts, Army Capstone Doctrine, and emerging Fires Center of Excellence concepts originating from the current campaign plan have definitely highlighted the need for an Integrated Fires Management Capability Program that provides digital clearance of Fires for joint and coalition land force engagement operations. So the need is there, but where do we go for solutions? I think we already have them in the Army inventory; we just need to put them together.

The overarching concept that will tie the initial stages of this together is the combination of the current air defense airspace management cell and the sense and warn portion of IFPC. If done properly, the 'lashing together' of IFPC with the maneuver force will have long been cemented prior to needing it again in the future fight.

I think the ADAM cell is the right place to start because of how the current interworking and configuration of the ADAM cell and the brigade aviation element cell. They are essentially one team. If IFPC is brought into the mix it would add another capability without adding any other major equipment inside the brigade combat team's tactical operation center, and it could also help to synergize the ADAM, BAE, and fire support coordinator/Fires support element cells into a team that dovetails perfectly with digital/dynamic clearance of Fires and the need for airspace deconfliction.

All the tools are there in these cells to make these things happen now; adding the Tactical Airspace Integration System, Forward Area Air Defense Command and Control System, Air and Missile Defense Work Station to the equation will only make it better.

manpower issue. Due to the lack of 14Js (C4ITactical Operations Center Enhanced Operator/Maintainers) as well as a shortage of 140As (Command and Control System Technicians) we currently have a critical shortfall of trained Soldiers and leaders who have the experience necessary to operate these systems. Normally, this is usually supplanted by personnel with the ADAM and BAE cells working in concert together to deconflict the airspace.

But, this shortfall could easily be fixed with new equipment training for air defenders, field artilleryman, and aviators – so everyone could work together and there would be no need for a force structure increase. Properly conducted training and manning shifts could be done prior to a unit deploying to one of the combat training centers, so that any battle roster changes could be made there instead of once in combat.

Additional software is needed. If the ADAM cell as well as the FEC and BAE were to combine it would provide a correlated air picture, clearance of Fires, decrease the amount of time for sensor to shooter, provide sense and warn to the BCT location, and respond to the attack faster and more accurately with a better point of origin grid coordinate. But, there would need to be upgrades to many units' software packages on their existing systems

as well as minor modifications to TOC layouts, so an effective integrated Fires management capability could be achieved. Digital clearance of Fires, joint airspace management, sense and warn, interface with ground troops, and a link to the Army Battle Command System could happen if capabilities would set these interworking cells apart as the doctrinal centerpiece for the BCT.

There are official reports of this being done in some fashion on FOBs that no longer have C-RAM Soldiers stationed there, but the ADAM cells in certain situations have shown their effectiveness in providing at least part of the integrated Fires management capability and allowing a BCT to have more efficient responsiveness to enemy attacks.

continues to come up with ideas and move toward concepts that integrate with other branches as well as the Fires Center of Excellence as a whole, other

questions and other possible solutions are inevitable. However, the main solution we are all searching for in the implementation of C-RAM or IFPC is how do we continue to save lives and how do we turn the force multiplier pillars of C-RAM (shape, respond, and protect) into something that will allow the maneuver commander in the field to put "Steel on Target" faster and more efficiently.

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PFC Alysha Gleason and SGT Chad Ervin conduct maintenance on a radar station at Forward Operating Base Delta, Iraq, Aug. 22, 2009. Both Soldiers are members of a counter-rocket, artillery and mortar team from Echo Battery, 4th Battalion, 5th Air Defense Artillery Brigade. (Photo by SSG Brien Vorhees, U.S. Army)